

## DETERMINING THE UTILITY OF FLORIDA'S VESSEL TITLE REGISTRATION SYSTEM TO CHARACTERIZE FLORIDA'S BOAT AND BOATING POPULATIONS

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Over 850,000 recreational boats are registered in Florida, which represents, on average, one boat for every 20 residents. The ever-increasing number of boats that use Florida's coastal bays, estuaries, and waterways has tremendous economic, environmental, and social impacts. However, State and local efforts to manage coastal resources and promote economic development are hindered by a lack of comprehensive, accurate, and spatially-referenced boat and boater information. The State-mandated Vessel Title Registration System (VTRS) has potential as a comprehensive source of boat and boater information to facilitate waterway planning and management throughout Florida.

This paper presents the background, methods, and initial results of an ongoing project initiated by the Florida Sea Grant and the Florida Fish and Wildlife Conservation Commission, Florida Marine Research Institute, to assess the utility of Florida's Vessel Title Registration System (VTRS) to accurately locate vessels and characterize boat populations in Florida. Accurate identification of boat locations (where they are moored, anchored, or docked) and characteristics (draft, length, type, use) is key to planning efforts that can address many topics, including tourism and recreation, channel maintenance, siting of boating infrastructure, future boating trends, environmental and social impact assessments, waterway security and safety issues, and business marketing and advertising

The study goal is to compare VTRS information with analogous data collected (for all saltwater-accessible canals and waterways) during contemporaneous on-the-water vessel censuses (OWC) in two coastal Florida counties (Lee and Manatee). Owner name and address information contained in the VTRS is address-matched and GIS procedures are used to associate OWC, GPS-derived vessel locations to property parcels that contain addresses. Congruency analyses determine the degree of correspondence between VTRS information and boat locations/characteristics obtained via OWCs. Mapped color-coded point patterns highlight the spatial distribution of congruence or non-congruence (vessel location or characteristics match) between OWC and VTRS data. The proportions of data points that fall into various congruency/non-congruency scenarios are calculated across selected geographic units (e.g., census block, block group, canal system). Inferential statistics are used to determine associations between each congruency/non-congruency scenario and waterway type (e.g., canal system, river, bay), vessel type (e.g., sail, speed, open-fisherman), and various socioeconomic and demographic characteristics (e.g., housing value, income, age). A telephone survey is used to determine which database (VTRS or OWC) is more accurate when a discrepancy occurs.

Recommendations to improve VTRS data collection procedures are to be made on the basis of results obtained from congruency findings. Benefits will include a cost effective and efficient process to: 1) accurately map boat locations, at various spatial resolutions (e.g., from parcel to county), that can be readily applied to other coastal areas throughout Florida and the United States; and 2) annually update the location and characteristics of boat populations for business and waterway planning applications.